

IN THE CLAIMS:

Claims 1-7 (Cancelled)

8. (Currently Amended) An artificial bone material comprising:

a porous ceramic consisting of β -tricalcium phosphate; and [[a]] at least one bone marrow cell incorporated in the porous ceramic, wherein the porous ceramic has a porosity of 60% to 90%;

the porous ceramic includes interconnected macropores of size from 50 μ m to 1,000 μ m, and micropores of size 2 μ m or less; and

wherein the macropores are present in an amount of 30% to 70% of the porosity, and the micropores are present in an amount of 10% to 40% of the porosity.

9. (Currently Amended) The artificial bone material according to claim 8, further comprising a cell growth factor contributing to osteogenesis, the factor being combined with the bone marrow cell.

10. (Previously Presented) The artificial bone material according to claim 9, wherein the cell growth factor comprises at least one substance selected from the group consisting of a bone morphogenetic protein, a fibroblast growth factor, a fibroblast growth factor- β , an insulin-like growth factor, and a platelet-derived growth factor.

Claims 11-12 (Cancelled)

13. (Currently Amended) ~~The~~ An artificial bone material ~~according to claim 12,~~
comprising:

a porous ceramic consisting of β -tricalcium phosphate; and

at least one bone marrow cell incorporated in the porous ceramic, wherein
the porous ceramic has a porosity of 60% to 90%;
the porous ceramic includes interconnected macropores of size 100 μm to 500
 μm , ~~that communicate to each other~~ and micropores of size 1 μm to 0.1 μm ; and
wherein the macropores are present in an amount of 30% to 70% of the porosity,
and the micropores are present in an amount of 10% to 40% of the porosity.

14. (Currently Amended) The artificial bone material according to claim [[11]] 8,
further comprising a cell growth factor contributing to osteogenesis, the factor being combined
with the bone marrow cell.

15. (Previously Presented) The artificial bone material according to claim 14,
wherein the cell growth factor comprises at least one substance selected from the group
consisting of a bone morphogenetic protein, a fibroblast growth factor, a fibroblast growth
factor- β , an insulin-like growth factor, and a platelet-derived growth factor.

Claims 16-19. (Cancelled)

20. (Currently Amended) A method of producing an artificial bone material,
comprising:

incorporating [[a]] at least one bone marrow cell in a porous ceramic consisting of
 β -tricalcium phosphate under at least one condition selected from the group consisting of:

(a) incorporating the bone marrow cell under reduced pressure or increased
pressure;

(b) incorporating the bone marrow cell by alternatingly reducing and increasing

the pressure; and

(c) incorporating the bone marrow cell by exerting a centrifugal force.

21. (Currently Amended) The method according to claim 20, wherein the porous ceramic has a porosity of 60% to 90%, and includes interconnected macropores of size 50 μm to 1,000 μm , ~~that communicate to each other~~ and micropores of size 2 μm or less; and

wherein the macropores are present in an amount of 30% to 70% of the porosity, and the micropores are present in an amount of 10% to 40% of the porosity.

22. (Currently Amended) The method according to claim 20, wherein the porous ceramic has a porosity of 60% to 90%, and includes interconnected macropores of size 100 μm to 500 μm ~~that communicate to each other~~ and micropores of size 1 μm to 0.1 μm ; and

wherein the macropores are present in an amount of 30% to 70% of the porosity, and the micropores are present in an amount of 10% to 40% of the porosity.

23. (Currently Amended) The method according to claim 20[[,]] further comprising incubating ~~wherein the incubation~~ the porous ceramic in which the bone marrow cell is incorporated ~~is performed~~ in the presence of a cell growth factor.

24. (Previously Presented) The method according to claim 20, wherein the porous ceramic is produced by molding a β -tricalcium phosphate powder synthesized by a mechanochemical method as a raw material, and then sintering the resultant.

25. (Currently Amended) The method according to claim 2[[0]] 3, further comprising applying stimulation selected from the group consisting of electric stimulation and mechanical stimulation to the bone marrow cell during the incubation.

Claim 26. (Cancelled)

27. (Currently Amended) The method according to claim ~~[[13]]~~ 20, wherein the bone marrow cell is a cultured one of the cells cultured from a bone marrow cell collected from a patient.